

# Appendix G: Background of the U.S. EPA Total Maximum Daily Loads (TMDL) Process

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## U.S. EPA TMDL Process

U.S. EPA is taking steps to achieve cleaner waters by revising the Total Maximum Daily Load (TMDL) program under the U.S. Clean Water Act. A TMDL is a framework for restoring impaired waters that follows three basic steps:

1. Calculation of the maximum amount of a pollutant that a waterbody can take in and still meet water quality standards;
2. An assessment of current loadings from all sources; and
3. A distribution of the amount calculated in #1 among the pollutant's sources, with an appropriate margin of safety.

Section 303(d) of the Clean Water Act (CWA) and U.S. EPA's implementing regulations at 40 CFR '130 and 40 CFR '132 describe the statutory and regulatory requirements for approvable TMDLs. Using this framework, states, territories, and authorized tribes develop tailored restoration plans for each waterbody that they have identified as impaired, as well as for each pollutant of concern. The minimum components of a TMDL include the following:

- Description of waterbody, pollutant of concern, pollutant sources and priority ranking
- Description of TMDL endpoints - applicable water quality standards or numeric water quality targets
- Loading capacity - amount of loading that a waterbody can receive without violating water quality standards
- Load allocations (LAs)
- Wasteload allocations (WLAs)
- Margin of safety (MOS)
- Seasonal variation
- Monitoring plan for TMDLs developed under the phased approach
- Contribution of pollutant from sediments, where appropriate
- Implementation plans (recommended under current policy)
- Reasonable assurances of implementation
- Public participation
- Submittal letter

The U.S. EPA TMDL process is undergoing significant revision in the year 2000. New regulations have been proposed that will change what is required under both the Section 303(d) lists and for TMDLs. Any strategy developed linking the U.S. EPA TMDL process and the LaMP will be adjusted to follow the new regulations as they are finalized.

## Relationship of the U.S. EPA TMDL process to the Lake Erie LaMP

A TMDL Strategy for Lake Erie is in the process of being discussed and planned. There are key issues to be resolved prior to developing a Lake Erie TMDL Strategy, including identifying those pollutants for which a TMDL is appropriate. The TMDL Strategy will not be designed to take the place of a LaMP now or in the future. A TMDL is one of the many tools that the LaMPs will discuss regarding how the Great Lakes will be managed. The TMDL and the load reduction aspect of the LaMP processes are similar, but there are several key distinctions between the processes.

1. TMDLs focus on adjusting loadings to achieve water quality standards. LaMPs have a broader focus that includes water quality as one of several possible environmental stressors and water quality standards as one of the several endpoints.

2. TMDLs are for the U.S. only. The Lake Erie LaMP is a joint U.S. - Canadian process.
3. TMDLs are a regulatory process. LaMPs may use regulations but, overall, have tended to be voluntary and partnership-based.

In summary, the U.S. EPA TMDL process and the LaMP process are intended to contribute to achieving the common objective of restoring the Lake Erie ecosystem. However, a TMDL defines ecosystem protection more narrowly through the application of water quality standards, and places greater emphasis on understanding the relationship between pollutant load and achievement of the standard. In contrast, the LaMP defines ecosystem protection and restoration more broadly and places greater emphasis on pollution control planning and developing implementation targets.

### Issues to Be Resolved

Several key issues need to be resolved for developing a U.S. EPA TMDL for Lake Erie to complement the Lake Erie LaMP and vice versa.

**Issue 1:** Agreement on the waterbodies and pollutants for which a TMDL is appropriate, and agreement on the roles and responsibilities associated with each of these areas: tributaries, nearshore waters, open waters of the lake.

**Issue 2:** Encouraging consistency in impaired waterbody, or Clean Water Act 303(d), listing procedures among the states.

**Issue 3:** Would partitioning the lake into segments be easier and more efficient to address with U.S. EPA TMDLs?

**Issue 4:** Maintaining consistency in endpoint determinations (water quality standards) among the states and U.S. EPA.

**Issue 5:** Integration with other Programs.

**Issue 6:** Clarify the relationship between LaMP restoration and protection goals and U.S. EPA TMDL endpoints (water quality standards).

**Issue 7:** Options for addressing air deposition of U.S. EPA TMDL pollutants.

**Issue 8:** Approaches for determining margin of safety when addressing fish consumption advisories.

### Next Steps in the U.S. EPA TMDL Development Process

This document is only the first step in the process to develop a U.S. EPA TMDL Strategy for Lake Erie. These are the next steps in the process:

- Gather comments on this strategy planning document.
- Convene Agency Representatives in the fall of 2000 to begin discussions on: a) Strategy Issues Section; b) plans for information meeting; c) plans for stakeholder meetings; d) clarify resources needs and availability; and, e) possible formation of workgroups.
- Convene an information meeting early in 2001 to review the preliminary results of the Devil's Lake Mercury Pilot Study, following release of U.S. EPA Headquarter's TMDL Guidance.
- Convene a series of stakeholder meetings and/or workshops to inform the development of a draft Lake Erie U.S. EPA TMDL Strategy.